

# NOAA Climate Science & Services

## Monthly Climate Update

A look back at June and a preview for August – October

**Jake Crouch**

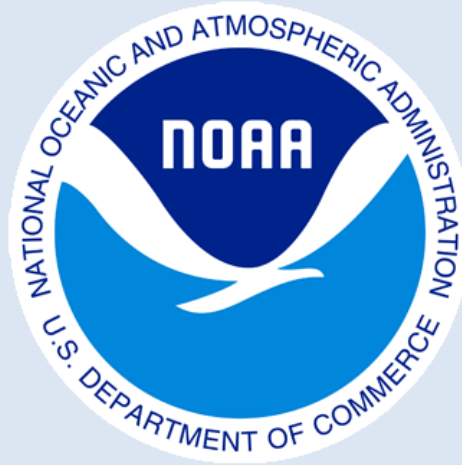
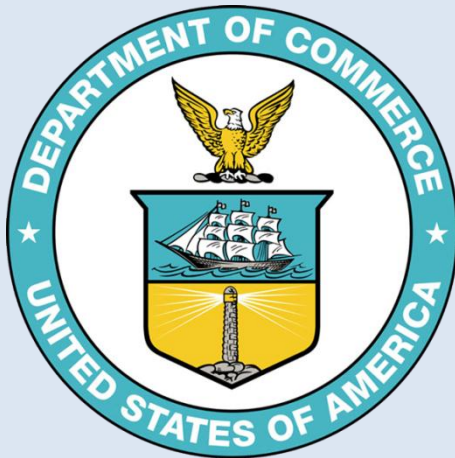
Climate Scientist, Climate Monitoring Branch,  
NOAA's National Climatic Data Center

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Drought Resource Specialist  
National Drought Mitigation Center

**Dan Collins**

Seasonal Forecaster, Operations Branch  
NOAA's Climate Prediction Center

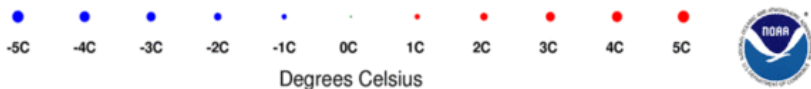
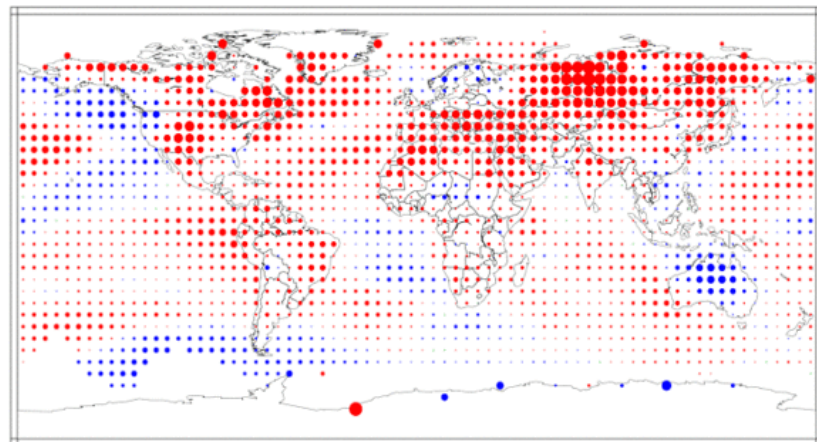


# Global Climate Highlights

## Temperature Anomalies June 2012

(with respect to a 1971-2000 base period)

National Climatic Data Center/NESDIS/NOAA



## June 2012 Temperatures:

- 4<sup>th</sup> warmest June globally ( $+0.63^{\circ}\text{C}/+1.13^{\circ}\text{F}$ ).
- Land: 1<sup>st</sup> warmest; Ocean: 10<sup>th</sup> warmest
- N. Hemisphere: 2<sup>nd</sup> warmest June on record
- 11<sup>th</sup> warmest January-June

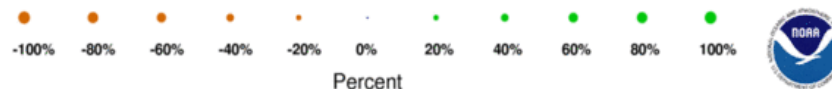
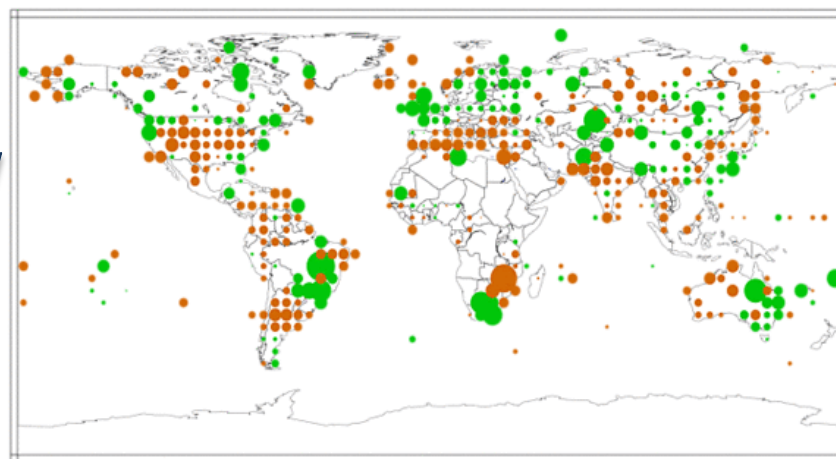
## Regional Analysis:

- ENSO-neutral conditions in Pacific
- U.K. – coolest June since 1991
- Austria – 6<sup>th</sup> warmest June in 250 years of record

## Precipitation Anomalies June 2012

(percent departures with respect to a 1961-1990 base period)

National Climatic Data Center/NESDIS/NOAA



## June 2012 Precipitation:

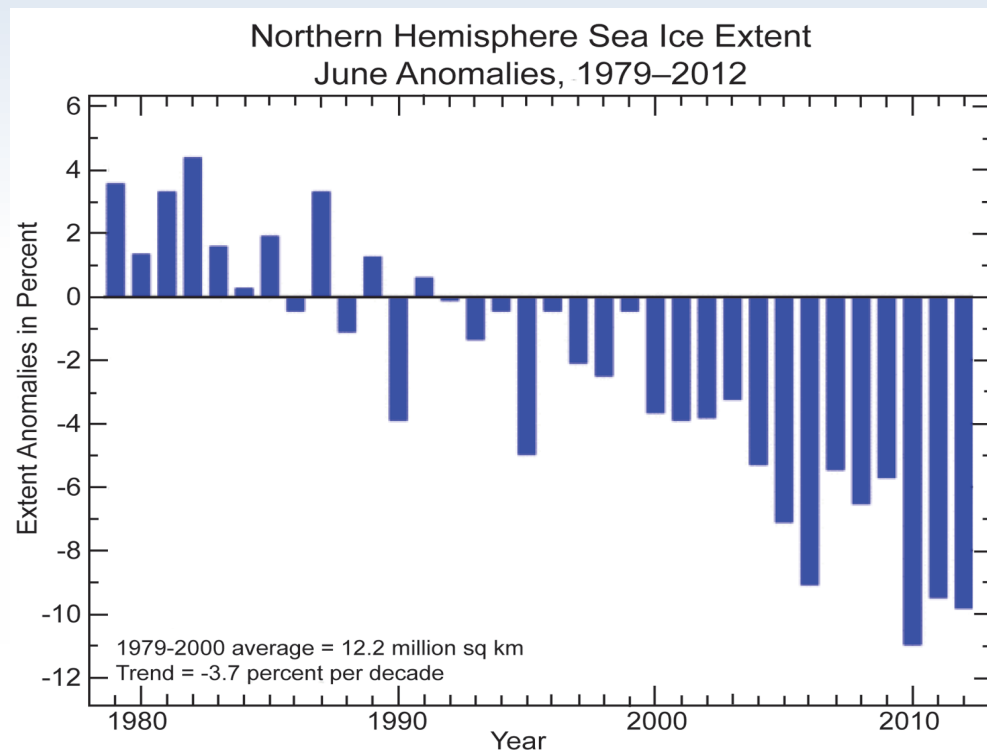
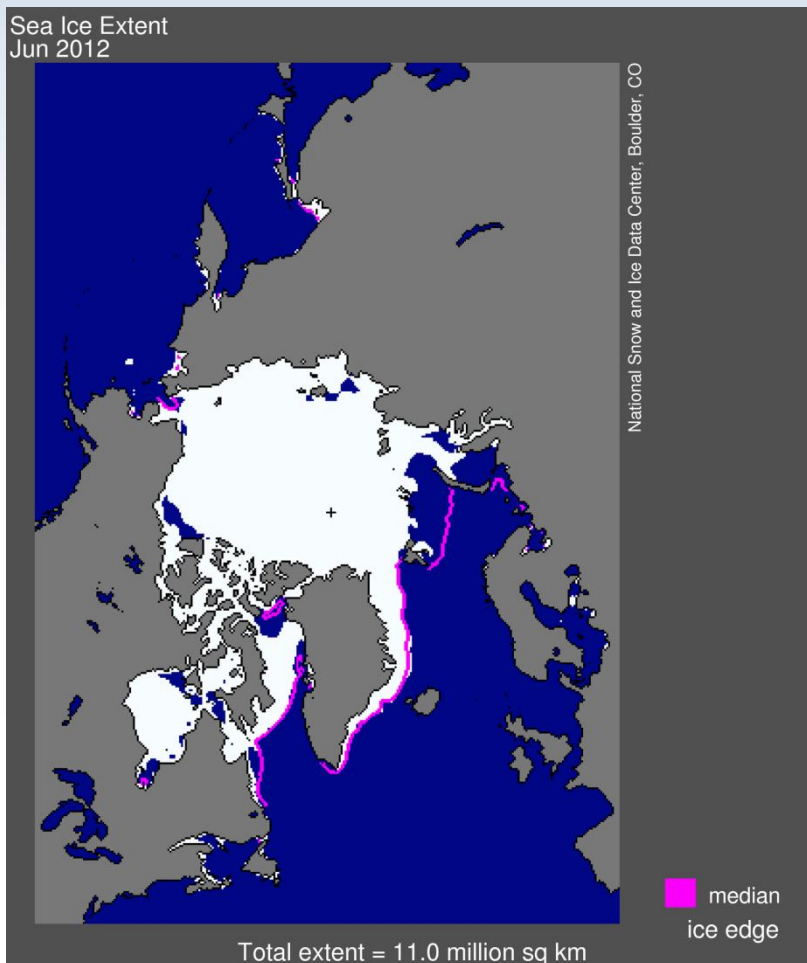
- Tropical Storm Debby becomes the fourth named storm of N. Atlantic season
- Tropical cyclones also affect Mexico and Philippines
- 5 million people evacuated in China due to flooding

**Dry:** Central U.S., Argentina, India, southern Europe

**Wet:** Brazil, South Africa, eastern Australia, U.K.

# Global Climate Highlights

**2<sup>nd</sup> smallest June Arctic Sea Ice Extent**  
**Record ice lost during June – 2.86 million square km**



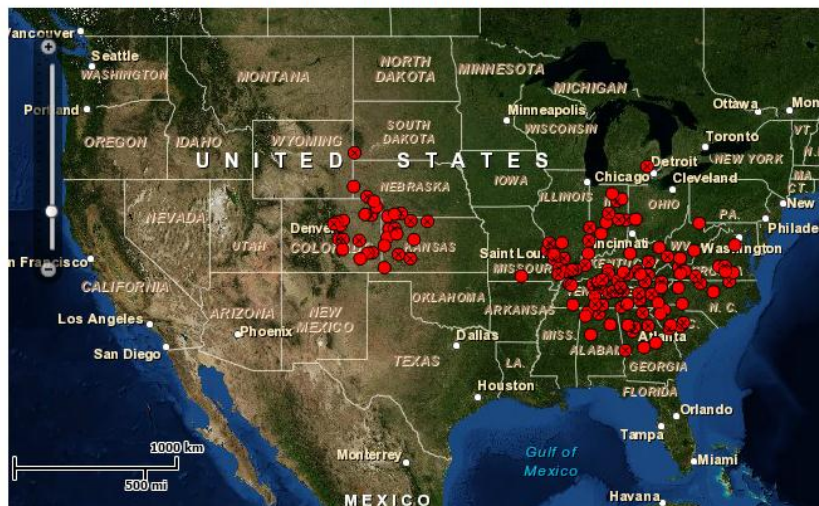
Data provided by the National Snow and Ice Data Center (NSIDC)

# U.S. Climate Highlights

## Nationally: 14<sup>th</sup> Warmest June/Warmest Year-to-date

- **June:** Warm in the Plains and Intermountain West
  - Colorado record warm, with 7 other states ten warmest
  - Cool in the Northwest and Southeast
  - 170+ all-time temperature records broken/tied during June
- **Year-to-Date:** First half of 2012 record warm
  - 28 states record warm for Jan-June, with 15 additional states top ten warm for the 6-month period
  - Only the Northwest “near-average”

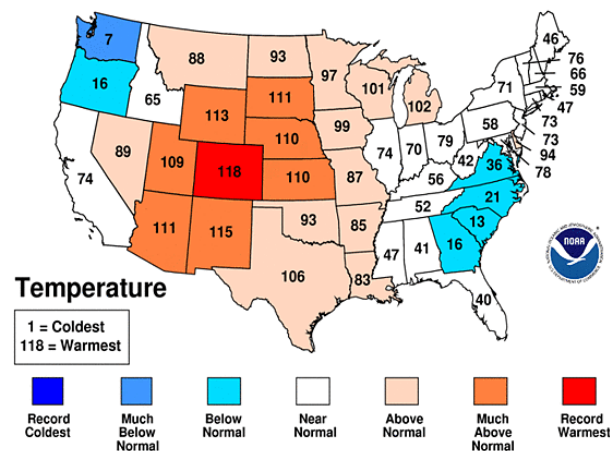
U.S. All-Time Highest Max Temperature Records set in June 2012



Out of a possible 183,345 records: 86 (Broken) + 87 (Tied) = 173 Total

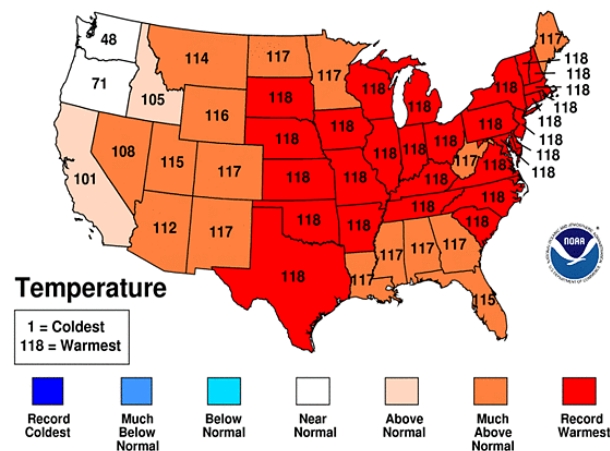
## June 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



## January-June 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA





# U.S. Climate Highlights

## Nationally: 10<sup>th</sup> Driest June/16<sup>th</sup> Driest Year-to-Date

### Drought conditions cover over half of Contiguous United States

#### June

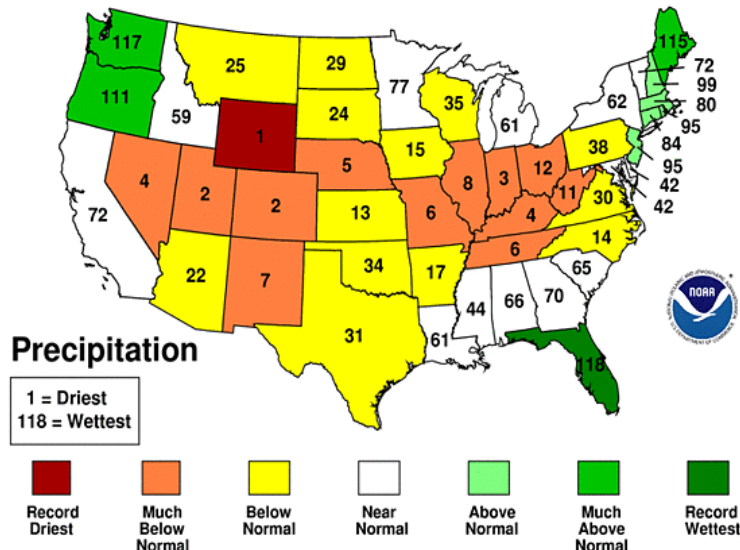
- Wet in Northwest, Northeast, and Florida (Debby)
- Dry from the Rockies, Plains, and into Ohio Valley

#### Year-to-Date

- Wet in Northwest and Upper Midwest
- Dry in Southwest, Mid-South, and Ohio Valley

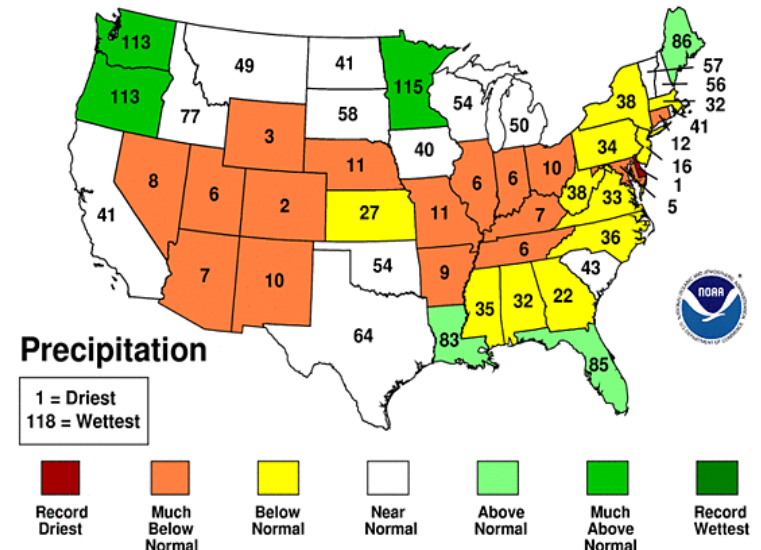
#### June 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



#### January-June 2012 Statewide Ranks

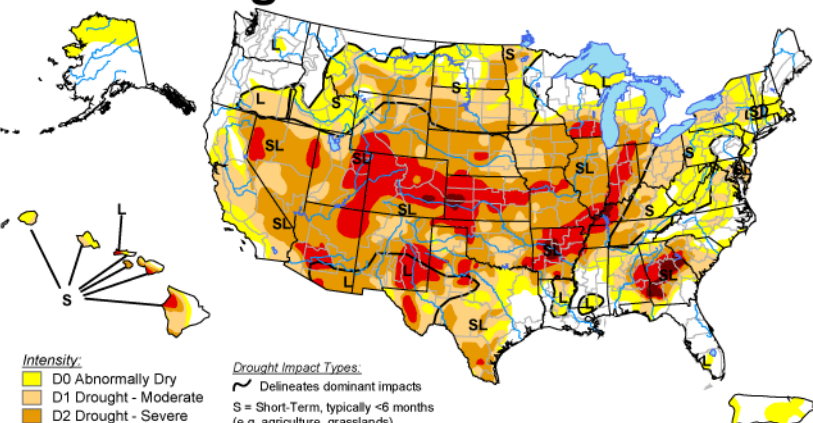
National Climatic Data Center/NESDIS/NOAA



# Drought Impacts

## U.S. Drought Monitor

July 17, 2012  
Valid 7 a.m. EDT



### Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

### Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months (e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



Released Thursday, July 19, 2012

Author: Richard Heim/Liz Love-Brotak, NOAA/NESDIS/NCDC

<http://droughtmonitor.unl.edu/>

### Drought Condition (Percent Area): United States Archive

- ☉ United States, including Alaska, Hawaii, and Puerto Rico
- Contiguous United States

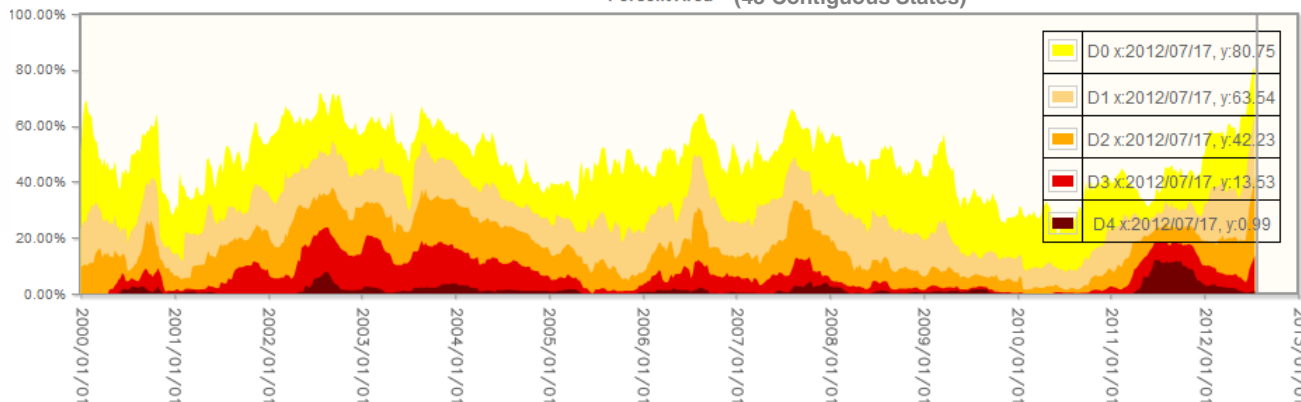
Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
07/17/12	27.62	72.38	53.17	35.32	11.32	0.83

### Drought Condition (Percent Area): United States Archive

- United States, including Alaska, Hawaii, and Puerto Rico
- ☉ Contiguous United States

Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
07/17/12	19.25	80.75	63.54	42.23	13.53	0.99

### Percent Area (48 Contiguous States)

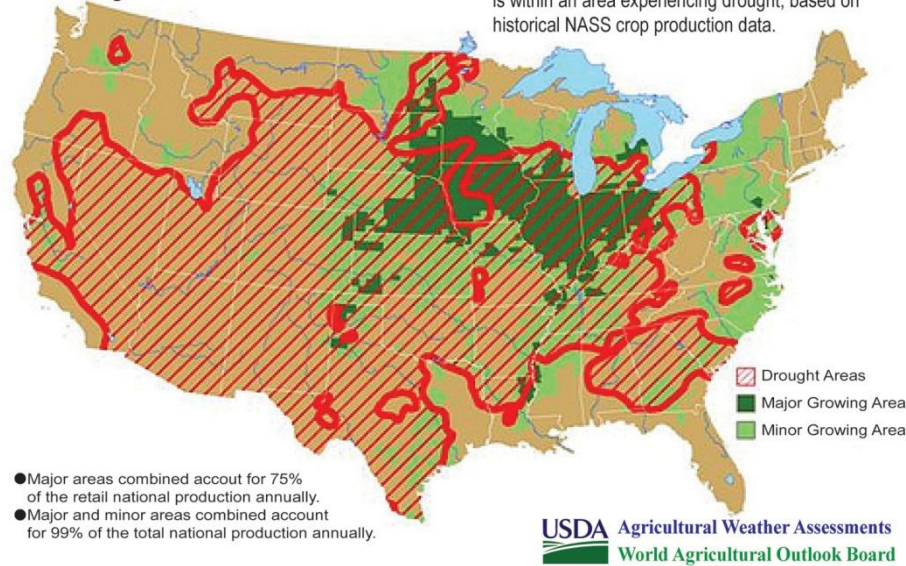


# Drought Impacts: Corn, Other Ag

## U.S. Corn Areas Experiencing Drought

Reflects July 10, 2012  
U.S. Drought Monitor Data

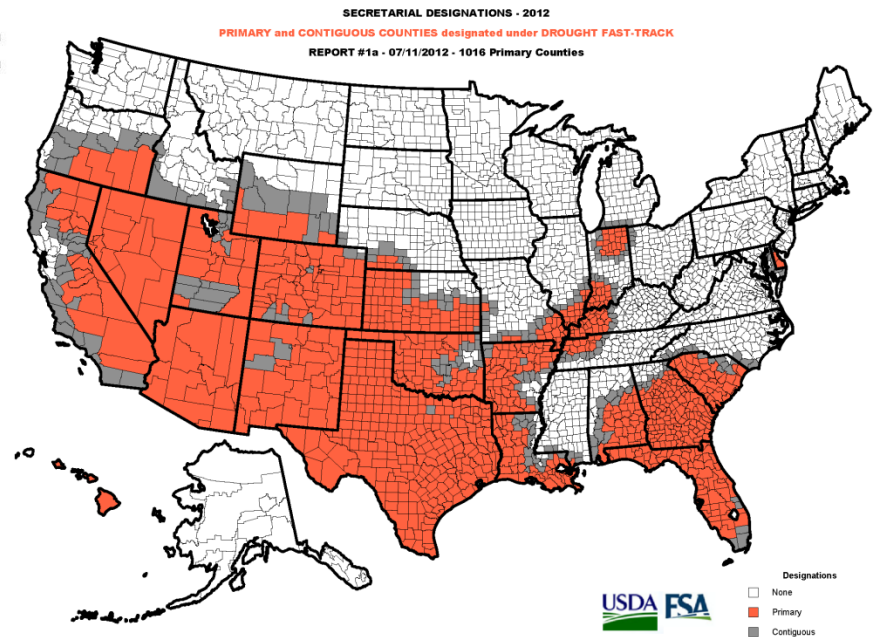
Approximately **78%** of the corn grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.



On July 11, USDA's World Agricultural Outlook Board cut the estimate for the 2012 U.S. corn crop by 1.82 billion bushels to "reflect expected impacts of persistent and extreme June and early-July dryness and heat across the central and eastern Corn Belt." The 12% cut, which left the projected U.S. corn production at 12.97 billion bushels, is a direct result of the nation's worst drought in a generation—since 1988. — Brad Rippey, USDA Meteorologist, Office of the Chief Economist

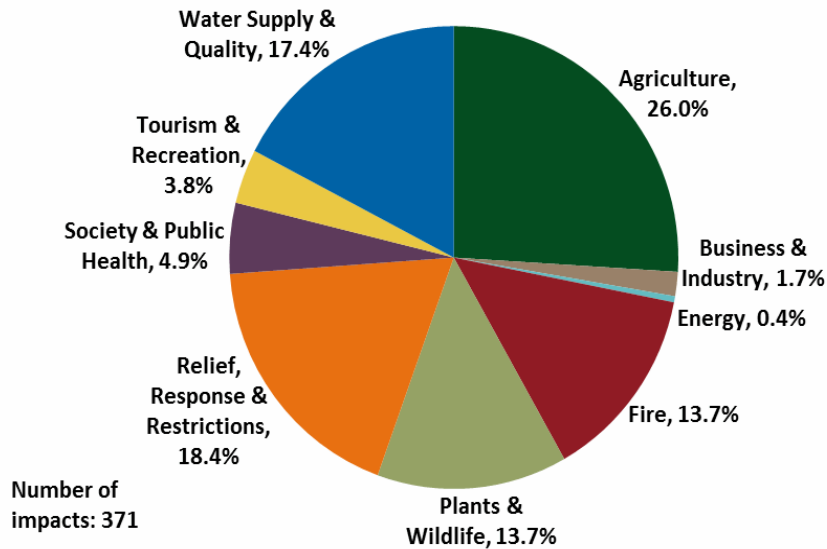
On July 11, US Secretary of Agriculture Tom Vilsack announced a streamlined disaster declaration process:

- 40 percent faster processing
- Lower interest rate
- Lower CRP payment
- Tied to D2 – Severe Drought
- Doesn't have to be initiated by a governor or tribal council

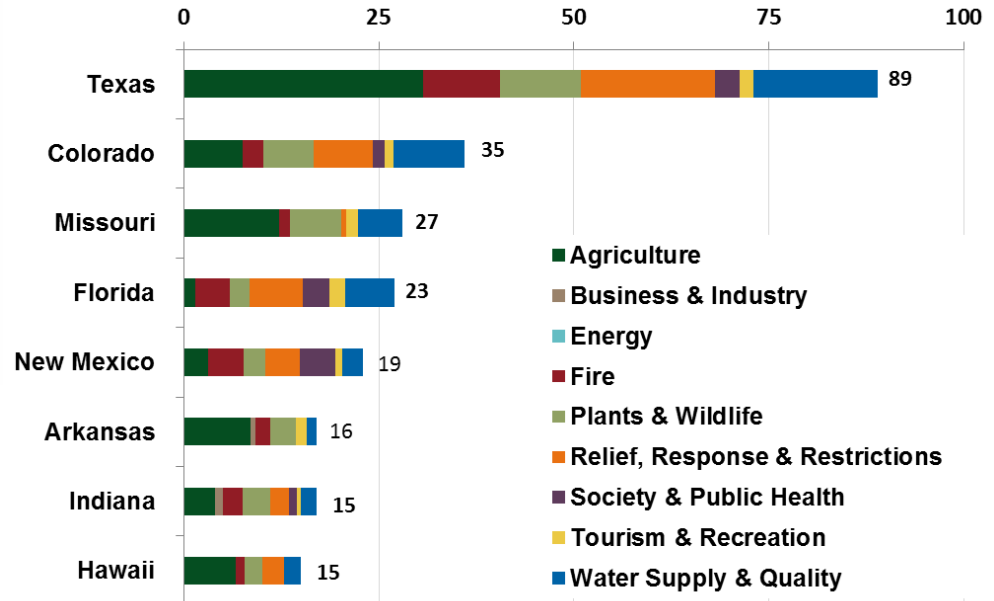


# Drought Impacts by Sector and State

**Drought impacts in the Drought Impact Reporter for April - June 2012**



**Impacts by state, April-June 2012**



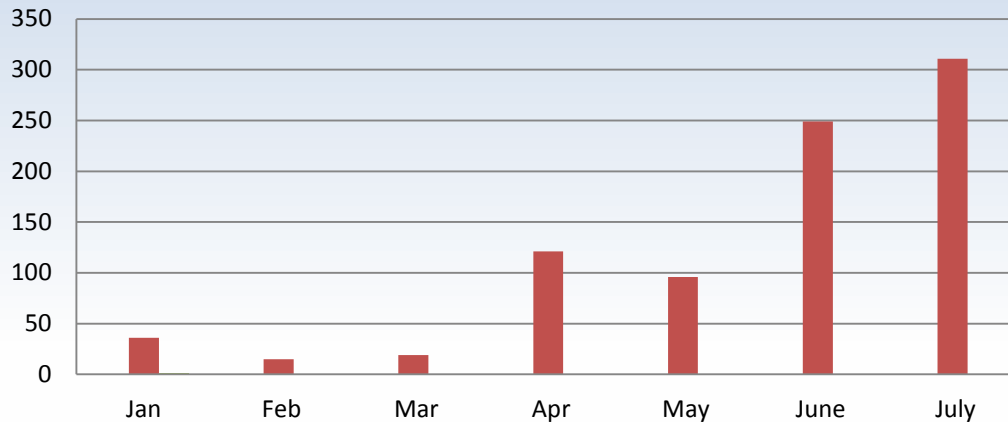


# Drought Impacts Timeline (Selected)

- Mid-July 2012: Concern about reduced crop yields, food prices, as USDA lowers yield forecasts and streamlines the disaster declaration process. Drought spreading across the Corn Belt.
- Mid-July 2012: City of Warrenton MO declares a water emergency and imposes mandatory conservation due to drought. Other communities face similar circumstances.
- July 2012: Many reports of irrigation water denied or curtailed, including 1,000 surface water users across the state of Nebraska.
- Early July 2012: Insect proliferation and damage reported in Missouri, Arkansas
- Late June 2012: Waldo Canyon Fire in Colorado was the most destructive in the state's history, with 346 homes burned.
- June-July 2012: Many communities across the central U.S. banned fireworks displays.
- May 2012: NM Gov. Susana Martinez issued a formal drought declaration to make it easier for communities and agricultural producers to seek assistance. Whitewater-Baldy fire in Southwest New Mexico burned 297,845 acres and was the largest in the state's history, expected to smolder until monsoons.

# Voluntarily Reported Drought Impacts

## Volunteer-Submitted Reports, Jan. 1-July 15



Reports for each month of 2012  
(including the first half of July) submitted  
by volunteers to the Drought Impact  
Reporter

“With the record-setting high temps. and several days of 108 to 113 degree temps, irrigation water shutting off and the dry hot wind, conditions of pasture have turned from bad to worse. Ranchers are now calling in with reports of finding dead antelope fawns in the shade of cedar posts, very sad situation. Cattle are starting to go to town.” From a farmer/rancher in Eads, Colorado, on June 28, 2012

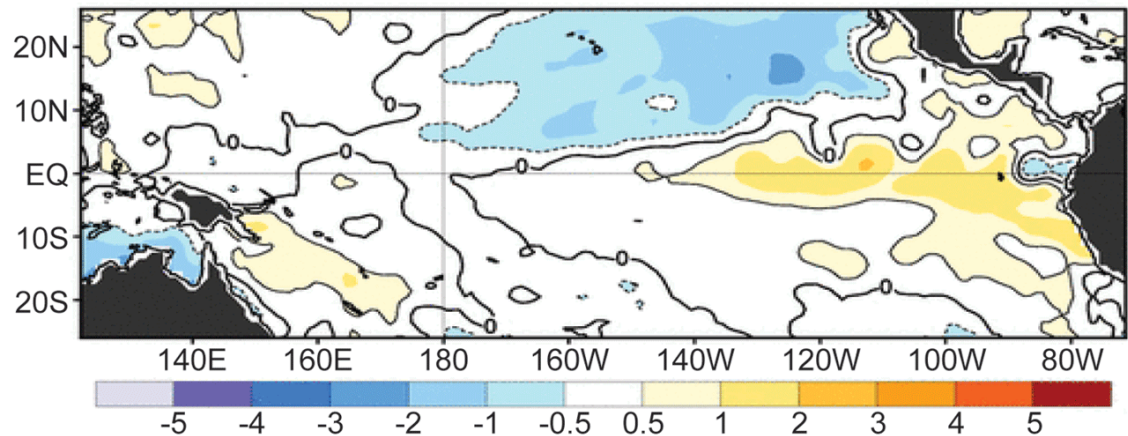
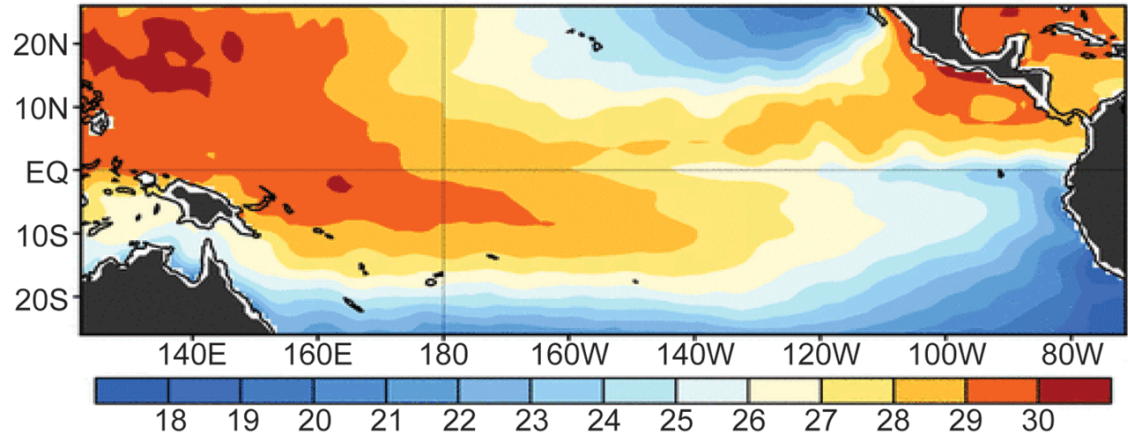


Severe crop (corn and soybeans and pasture) stress in Marion and Jefferson counties, Illinois. Some corn at tassel stage. From Martin Culik, Bloomington, Illinois, on June 29, 2012

# Latest Sea Surface Temperatures

**ENSO Neutral Conditions;  
Warmer than normal  
East Pacific temperatures**

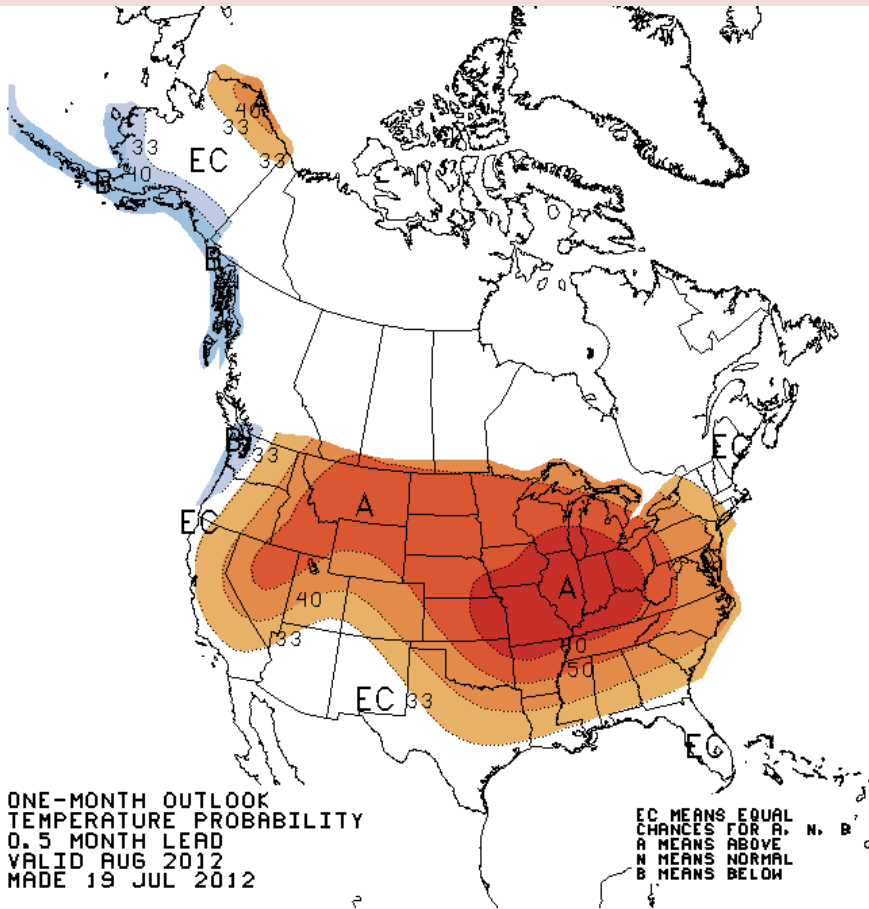
Observed Sea Surface Temperature (°C)



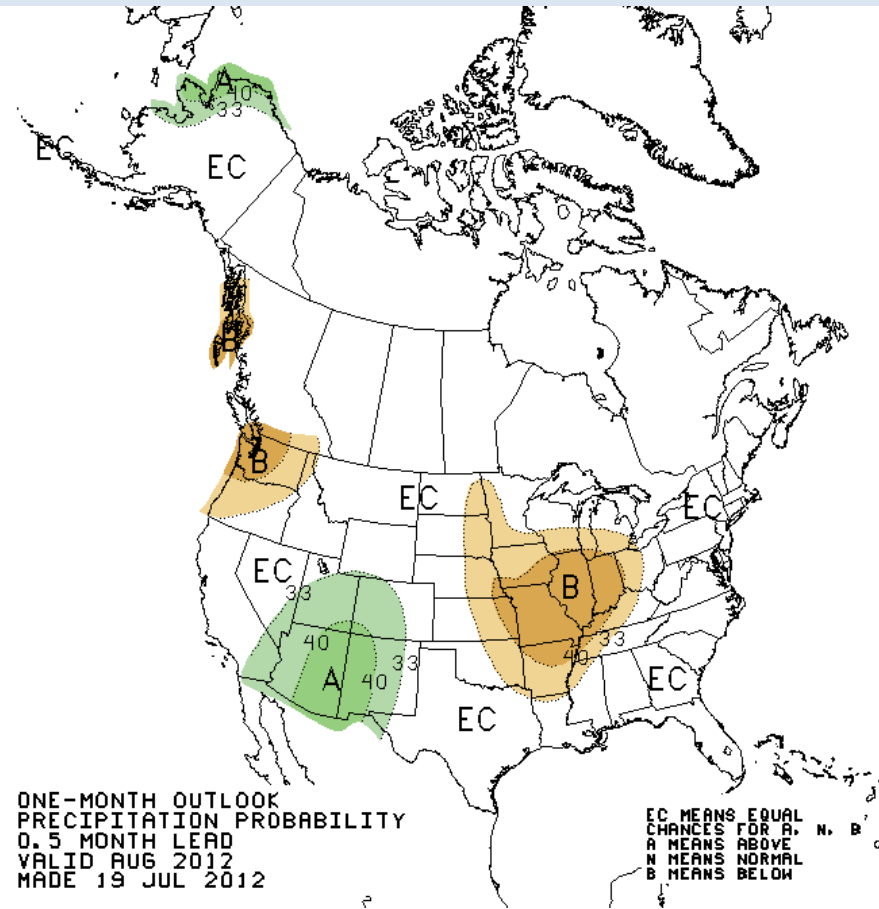
7-day Average Centered on June 13, 2012

# 1-Month Temperature and Precipitation Forecast

## AUGUST AVERAGE TEMPERATURE PROBABILITY



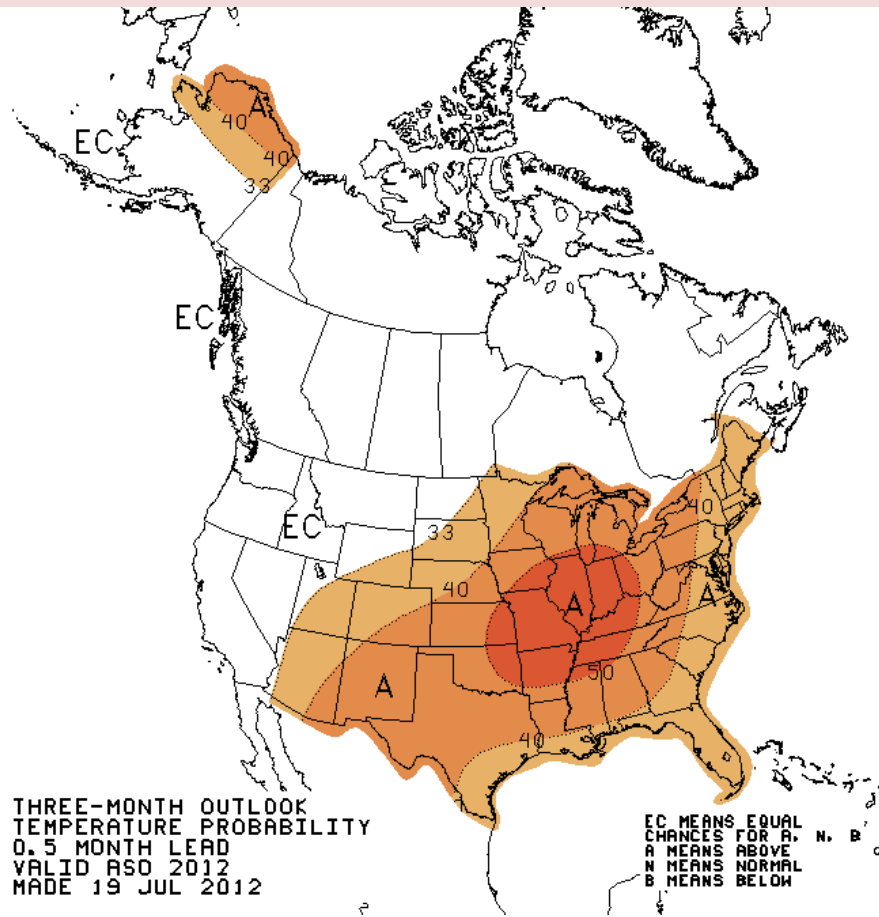
## AUGUST TOTAL PRECIPITATION PROBABILITY



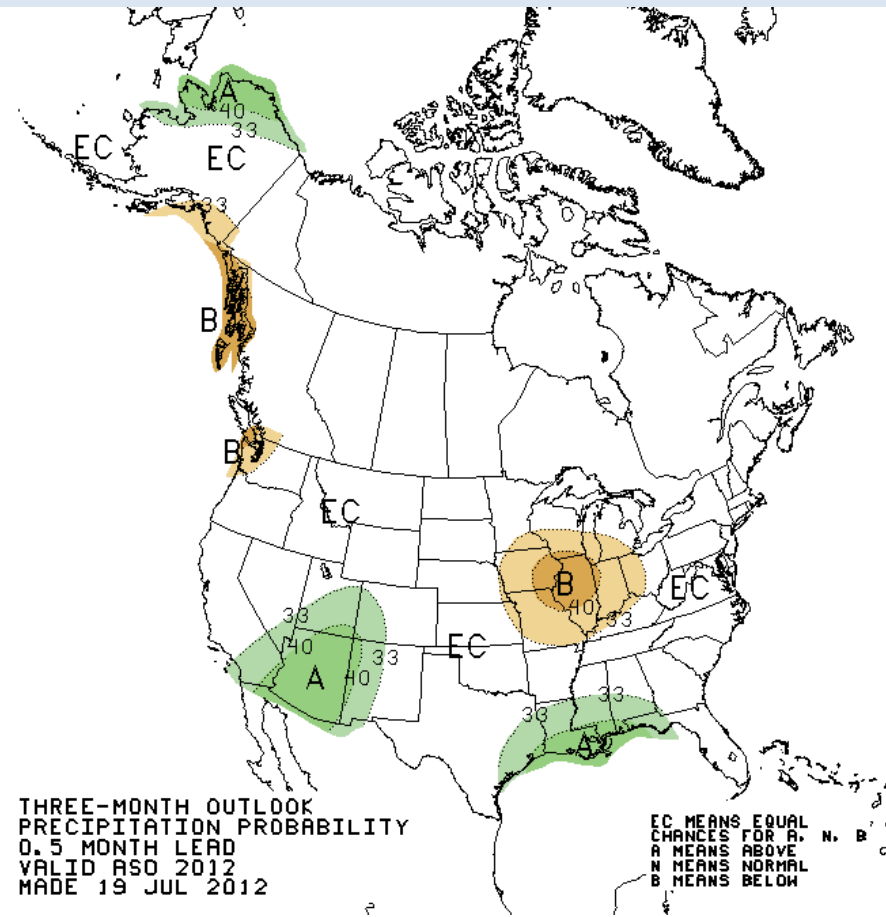


# 3-Month Temperature and Precipitation Forecast

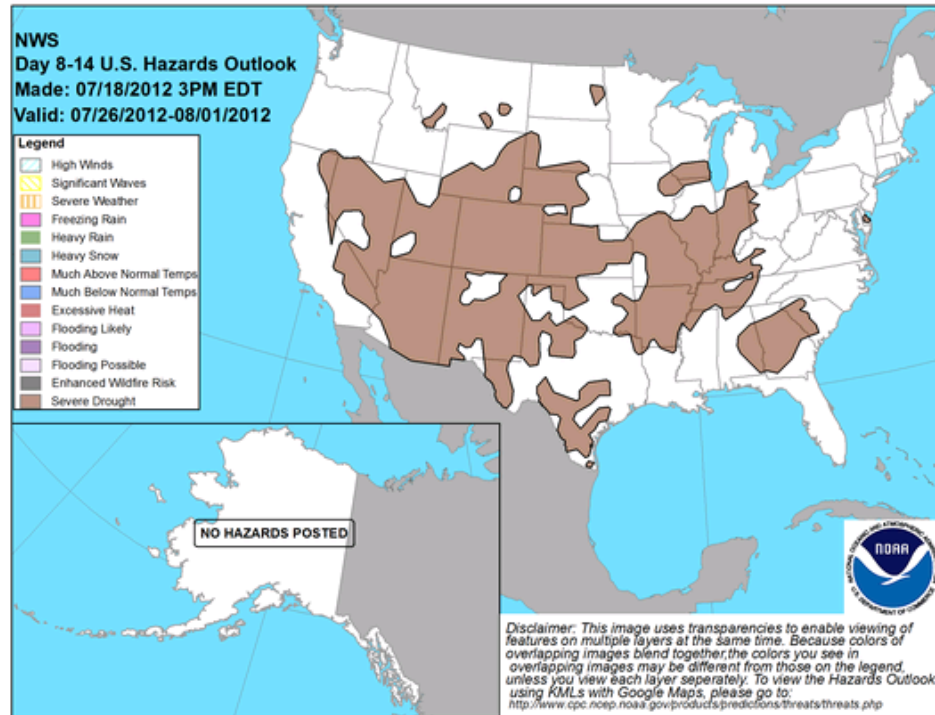
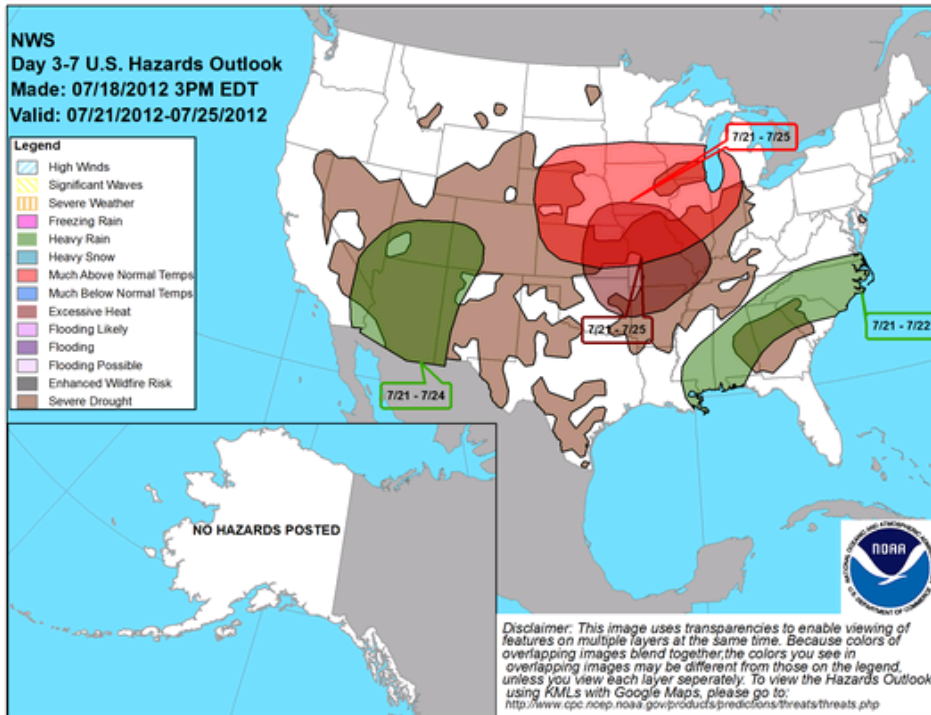
## AUG-SEP-OCT AVERAGE TEMPERATURE PROBABILITY



## AUG-SEP-OCT TOTAL PRECIPITATION PROBABILITY



# Latest U.S. Hazards Outlook for Days 3-14



# For More Information



## Today's Presentation:

- <http://www.ncdc.noaa.gov/sotc/briefings>

NOAA's National Climatic Data Center: [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

- Monthly climate reports (U.S. & Global): [www.ncdc.noaa.gov/sotc/](http://www.ncdc.noaa.gov/sotc/)

NOAA's Climate Prediction Center: [www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

U.S. Drought Monitor: <http://droughtmonitor.unl.edu/>

Drought Impacts Reporter: <http://droughtreporter.unl.edu/>

Climate Portal: [www.climate.gov](http://www.climate.gov)

## Media Contacts

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- Kelly Helm Smith, 402-472-3373, [ksmith2@unl.edu](mailto:ksmith2@unl.edu) (Natl. Drought Mitigation Center)